



"A partnership to nurture continuing educational excellence"

The Southern Alberta Professional Development Consortium

Regional Mathematics Implementation Report

**2009 – 2010
(Year 2)**

Submitted to Alberta Education

by:

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2009-2010**

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Desired Results

Established Goal: To provide effective professional development opportunities for implementation of the revised Mathematics Program of Studies to all Grades K – 12 Mathematics teachers, administrators and curriculum leaders in the SAPDC region. The focus is to enhance professional practice and build capacity, ultimately promoting and enhancing student learning. The specific target audience is educators of Grades 3, 6, 9 & 10, in preparation for 2010-2011 pre- implementation, as well as those for which implementation of the revised Mathematics Program of Studies is already mandatory.

Enduring Understandings:

“The primary purpose of public schooling is to promote student learning. Research has shown student learning is enhanced when jurisdiction staff has access to effective professional development. Professional development should focus on enhancing professional practice and building capacity.”

A Guide to Comprehensive Professional Development Planning

“Successful implementation requires the coordinated, collaborative, and comprehensive efforts of education partners working together towards a shared vision of learning success for all students.”

A Guide to Support Implementation: Essential Conditions

Essential Questions:

What professional development opportunities have Grades K – 12 Mathematics teachers, administrators and curriculum leaders in the SAPDC region had access to, and have they been effective?

Have the professional learning opportunities that the SAPDC has offered enhanced professional practice and built capacity? If so, what professional practices are now being seen in classrooms which reflect the revised Mathematics P of S and promote and enhance student learning?

Results:

As a result of the professional development opportunities SAPDC has offered to support implementation of the revised Mathematics P of S to all Grades K – 12 Mathematics teachers, administrators and curriculum leaders in the SAPDC region, professional practice will be enhanced, capacity built, and ultimately, learning success for all students.

Evidence of Success

Quantitative Indicators and Evidence:

- Number of regional and district sessions, as per list of sessions
- Number of participants who attended regional and district sessions as per attendance data
- Percentage of participant intent to change practices, and satisfaction with both regional and district sessions as per the ARPDC Feedback forms throughout the year
- Percentage of stakeholders comfortable with teaching the revised P of S, as well as greatest areas of need as reported on the annual year end survey
- Percentage of stakeholders implementing formative and performance-based assessment as well as greatest areas of assessment needs, as reported on the annual year end survey

Qualitative Indicators and Evidence:

- District curriculum leader satisfaction with district sessions as reported on the Post Session Reporting form throughout the year
- Participant comments re: change of practice in the areas of planning, assessment, instructional strategies, & student engagement as per the:
 - SAPDC teacher “Evidence of Success” reporting form throughout the year
 - year end survey
- Administrator observation of teaching practices including planning, assessment, instructional strategies, and student engagement as per the year end SAPDC Administrator “Evidence of Success” reporting form
- Suggestions for professional development to support further learning, from participants at both regional and district day sessions and reported on ARPDC Feedback forms

Goal #1: Support curriculum implementation	
<p>Strategy 1:1: Regional support for educators of Grades 3,6,9 & 10 in preparation for 2010-2011 pre-implementation. Capacity building, administrator support & delivery via distributed learning is incorporated.</p> <p>Strategy 1:2: Regional support for educators for which implementation of the revised Program of Studies is already mandatory. Capacity building, administrator support & delivery via distributed is learning incorporated.</p>	
Indicators	Evidence
<ul style="list-style-type: none"> Number of regional sessions Number of participants 	<ul style="list-style-type: none"> List of regional sessions Attendance data
<ul style="list-style-type: none"> Percentage of participants' intent to change their practice Percentage of participants satisfied with regional sessions 	<ul style="list-style-type: none"> ARPDC Feedback form from regional sessions
<ul style="list-style-type: none"> Percentage of stakeholders comfortable with teaching the revised P of S Greatest areas of need 	<ul style="list-style-type: none"> Year end survey
<ul style="list-style-type: none"> Percentage of stakeholders implementing performance based, and formative assessment Greatest areas of assessment needs 	<ul style="list-style-type: none"> Year end survey

Goal #2: Provide support for district implementation plans/district needs	
<p>Strategy 2:1 Support for district plans including Implementation Support Teacher delivered sessions Capacity building, support for administrators and delivery via distributed learning is incorporated.</p>	
Indicators	Evidence
<ul style="list-style-type: none"> Number of district sessions Number of participants 	<ul style="list-style-type: none"> List of district sessions Attendance data
<ul style="list-style-type: none"> Percentage of participants' intent to change their practice Percentage of participants satisfied with district sessions 	<ul style="list-style-type: none"> ARPDC session feedback form from district sessions
<ul style="list-style-type: none"> District curriculum leader satisfaction with district sessions 	<ul style="list-style-type: none"> Comment sample from district Post Session Report

Goals 1 & 2: Support curriculum implementation Provide support for district implementation plans/district needs	
Indicators	Evidence
<ul style="list-style-type: none"> Participant comments re: change of practice in the areas of planning, assessment, instructional strategies and student engagement 	<ul style="list-style-type: none"> Comment sample from SAPDC teacher "Evidence of Success" reporting form throughout the year and year end survey
<ul style="list-style-type: none"> Administrator observation of teaching practices 	<ul style="list-style-type: none"> Comment sample from SAPDC administrator "Evidence of Success" reporting form
<ul style="list-style-type: none"> Suggestions for professional development to support further learning 	<ul style="list-style-type: none"> Comment sample from ARPDC Feedback form from regional sessions

Indicators:	Number of regional sessions / Number of participants
Evidence:	List of regional sessions / Attendance data
	(A summary is provided below; for more comprehensive data refer to Appendix A)

Focus		Regional sessions specific to Mathematics	No. of regional sessions	No. of participants
Grades 3, 6, 9, 10	Ongoing Support			
▶		Grade 3, 6, 9 and 10C Pre-implementation Series – David DeCoste	22	1017
▶		Grade 10 Revised P of S – Christine Henzel (VC from Edmonton to Lethbridge & Medicine Hat)	1	33 VC
▶	▶	Division II and III – Math Collaborative Work Sessions – Bonnie Layton	9	99
▶		Mathematics 10C Cohort – Layton, Mary Jo Rawleigh	4	24
▶		Grade 3, 6 and 9 Provincial Achievement Exam Pilot Test – AB ED	6	126 + 29 VC
▶		Provincial High School Math Institutes (VC from Calgary to Leth and MH) Jan and June and follow-up webinars	4	142 VC
▶		HS Mathematics Institute Facilitator Training and VC Test – Ken Hakstol	1	5 VC
▶		High School Mathematics Power Point Presentation – Rawleigh	1	10
▶		Grade 10 – Mathematics Collaborative Work Sessions – Rawleigh	4	30
▶	▶	Division I – Mathematics Games and Manipulatives – Chris Kuly	2	79
▶	▶	Grades K-3 Mathematics – Number Sense – DeCoste	1	42
▶	▶	What is my Child Learning in Mathematics K-9 and HS – Layton, Rawleigh	3	16 + 41 VC
▶		Grade 9 and 10C Mathematics Planning Sessions – DeCoste	3	42
▶		Grade 9 -10 Math Transition – DeCoste	1	15
▶		Orchestrating the Experiences in Mathematics 10-3 – John Scammell	1	39 + 3 VC
	▶	Grade 2, 5, 8 Mathematics Series – DeCoste	12	342
	▶	New to Kindergarten and Grade 1, 4, 7 Mathematics Series – DeCoste	4	81
▶	▶	Instructional Leadership in Mathematics – DeCoste	1	24
▶	▶	Differentiation in Grades 3 – 6 and Middle/HS – Marian Small	4	121 + 33 webinars
▶	▶	15 Ways to Fix Broken Grades – Ken O'Connor	6	102 webs
▶	▶	French Immersion Mathematics Support – Renee Michaud	1	7
▶	▶	South Western and South Eastern Conventions – Layton and Rawleigh	4	89
		TOTAL REGIONAL SESSIONS SPECIFIC TO MATHEMATICS 2009-10	95	2591
		TOTAL REGIONAL SESSIONS SPECIFIC TO MATHEMATICS 2008-09	45	1801
		Regional sessions applicable, but not specific to Mathematics		
▶	▶	Schooling by Design – McTighe; Understanding by Design – Clayton	4	364
▶	▶	AAC-SAPDC Assessment Conf.; Leadership assess. webinars – Bennett	4	18 webinars
▶	▶	Differentiated Instruction in Elementary and Jr/Sr High – Kathy Nunley	2	181
▶	▶	Learning Cubed: Engaging the Whole Child – Antonetti	1	52
▶	▶	Teach AnyWare – Mark Anderson	3	43 +14 webs
▶	▶	Senteo Interactive Response System – Hakstol	2	28
▶	▶	SMART Boards for the Novice, Beginner, Intermediate – Hakstol	9	146
▶	▶	Moodle – Todd Diakow	7	101
▶	▶	TPACK – Judy Harris	2	59
▶	▶	VC Session – Hakstol	1	10

Indicators:	Number of district sessions / Number of participants
Evidence:	List of district sessions / Attendance data
	(A summary is provided below; for more comprehensive data refer to Appendix B)

Grades 4 – 9 Implementation with Support Teacher, Bonnie Layton

Jurisdiction	District sessions	No. of district sessions	No. of participants
Grasslands Regional Division	Grade 7/8 overview, collaborative planning; UbD	3	12
	Grade 4/5 long range planning, using manipulatives	2	25
Holy Spirit Catholic Schools	Grade 4/5/6 using technology, (senteos) manipulatives, tech, literature	7	60
	Jr High overview of curriculum changes, using manipulatives	2	21
Horizon School Division	Teaching using the process skills and collaborative planning	1	25
Lethbridge School District	Grade 6/7/8 instructional strategies, teaching with process skills	1	21
	SMART technologies	1	12
	Substitute teachers	1	11
Medicine Hat Catholic Schools	Grade 6/7/8 teaching through problem solving, using manipulatives	2	11
	Grade 4/5/6 using manipulatives	2	23
Medicine Hat 76	Grade 7/8 problem solving (session with PRRD)	1	14
Palliser Regional Division	Grade 4/5 manipulatives, problem solving, writing in mathematics	3	62
	Grade 7 manipulatives	1	3
Prairie Rose Regional Division	Planning meeting with MHSD	1	10
	Mathematics 4/5/6 review & manipulatives (session with MHSD)	1	9
	Mathematics 7/8/9 review & manipulatives (session with MHSD)	1	4
	Grade 9 teaching the Program of Studies	1	3
Westwind School Division	Planning meeting	1	12
	Smart Board for lead teachers	1	11
	Grade 7/8/9 curriculum planning	1	12
	Grade 4/5/6 curriculum planning	1	13
	Technology in Div II and Div III	1	11
		2	19
Livingstone Range School Division	Grade 7/8 curriculum planning, building alternate assessments	2	16
	Grade 4/5 curriculum, manipulatives, assessment	2	17
	TOTAL GRADES 4 – 9 DISTRICT SESSIONS 2009-10	42	437

High School Implementation with Support Teacher, MaryJo Rawleigh

Jurisdiction	District sessions	No. of district sessions	No. of participants
Grasslands	Mathematics 10C lesson planning	1	7
Holy Spirit Catholic	Comparison of old & new curriculum, introduction to manipulatives	3	4
	Mathematics 10C curriculum changes		7
	Assessment and resources		4
Horizon	Comparison of old & new curriculum, introduction to manipulatives	3	4
	Mathematics 10C curriculum changes		12
Medicine Hat Catholic	Grade 10 curriculum changes	2	8
Palliser Regional	Mathematics 10C curriculum changes	1	13
Prairie Rose Regional	Grade 10 overview (session with Medicine Hat 76); Technology	2	18
Westwind	Curriculum changes	2	13
	TOTAL HIGH SCHOOL DISTRICT SESSIONS 2009-10	14	90
	District sessions presented by Ken Hakstol, applicable, but not specific to Mathematics		
	Using Blogs, Wikis,	2	60
	SMART Boards	6	62
	Video Conferencing	2	18

Indicators:	Percentage of participants' intent to change their practice after attending a regional session	
	Percentage of participants satisfied with regional sessions	
Evidence:	ARPDG Feedback form from regional sessions	
	2008-09	2009-10
I plan to apply the information learned into my practice.	97.0%	98.59%
Overall, I was satisfied with this session.	96.5%	98.71%

Indicators:	Percentage of participants' intent to change their practice after attending a district session	
	Percentage of participants satisfied with district sessions	
Evidence:	ARPDG Feedback form from district sessions	
	2008-09	2009-10
I plan to apply the information learned into my practice.	98.2%	100%
Overall, I was satisfied with this session.	99.5%	100%

Indicator:	District curriculum leader satisfaction with district sessions
Evidence:	Comment sample from district Post Session Reports

- *Excellent job sharing best practices for the revised P of S.*
- *Teachers pleased with exploration, collaboration and development of lessons.*
- *Excellent in meeting teacher needs. There will no doubt be 'show and share' about the successes of manipulatives in increasing student engagement in the math class. Next steps will be to keep anecdotal notes on the usage of manipulatives in the grade 8 classes - how the students respond, what is observed with regard to attitude toward manipulatives over time, any parental or community comments, etc.*
- *Very useful and practical session that enabled classroom teachers to take the information shared and apply it in their classroom/program. Follow-up at each school site by the math departments within their professional learning teams.*
- *The session was extremely valuable. It provided the substitute teachers with information, skills, and the ability to support the classroom teacher's programs when they were serving as a substitute teacher in the classroom for a short time period.*
- *Good follow-up to regional sessions.*
- *Supports both our school division 3 year plan for increasing student achievement as well as our AISI plans.*
- *Fits with district AISI focus on assessment.*
- *Achieves our AISI Cycle IV goal of modeling 21st century learning incorporating SMART Board technology, student response systems, and VC.*
- *Our PD goals were to access specialists within Alberta to help teachers understand the new Mathematics curriculum. The SAPDC has done an outstanding job meeting our PD needs within our division.*

Indicator:	Percentage of stakeholders comfortable with teaching the revised Mathematics P of S				
	Greatest areas of need				
Evidence:	Year end surveys				

Comfort Level	Not Comfortable		Comfortable		Very Comfortable	
	08-09	09-10	08-09	09-10	08-09	09-10
Overall	10.4%	12.7%	57.5%	57.8%	32.0%	29.6%
		09-10		09-10		09-10
Teaching the process skills		12.7%		58.7%		28.6%
Teaching the instructional strategies		17.0%		62.1%		20.9%
Teaching the content		8.3%		52.5%		39.2%

Greatest areas of need in planning and teaching the process skills	2009-10
Problem Solving	43.53%
Technology	42.27%
Visualization	40.69%

Greatest areas of need in planning and teaching the instructional strategies	2009-10
Effective application of technology	43.95%
Addressing diversity of learning styles, cultural backgrounds, and developmental stages	42.68%
Integration of problem solving, reasoning and connections	38.22%

Greatest areas of need in planning and teaching the content	2009-10
Statistics and Probability	37.69%
Number	33.96%
Shape and Space	33.96%

Indicator:	Percentage of stakeholders implementing performance based and formative assessment				
	Greatest areas of assessment needs				
Evidence:	Year end surveys				

Frequency of performance based assessment within a grading period	0 or 1 time		2 or 3 times		4 or more times	
	08-09	09-10	08-09	09-10	08-09	09-10
	34.27%	37.6%	40.50%	45.2%	25.23%	17.52%

Frequency of formative assessment	Once a week		Every Day		Seldom if ever	
	08-09	09-10	08-09	09-10	08-09	09-10
	43.26%	33.75%	45.77%	58.99%	10.97%	7.6%

Greatest areas of assessment needs	2008-09	2009-10
Designing effective performance/project based assessments	54.17%	73.25%
Creating opportunities for meaningful formative assessment	38.78%	49.36%
Developing effective rubrics	37.18%	44.90%
Long range/unit planning aligning with learner outcomes	41.03%	39.81%

Indicator:	Participant comments re: change of practice in the areas of planning, assessment, instructional strategies, and student engagement
Evidence:	Comment sample from SAPDC teacher “Evidence of Success” reporting form throughout the year and year end survey

Planning

<i>Focus on addressing each outcome/less on following the textbook</i>	<i>Plan using UbD format</i>
<i>Design plans around learning abilities rather than following the text</i>	
<i>Integrate strands, across the curriculum and with the real world</i>	<i>Layered curriculum</i>

Assessment

<i>Outcome based reporting</i>	<i>Checklists for objectives and skills</i>	<i>Anecdotal</i>
<i>Assessment for learning</i>	<i>Project and performance tasks</i>	<i>Authentic</i>
<i>Written assessments</i>	<i>Less summative and more formative</i>	

Instructional Strategies

<i>Emphasis on understanding</i>	<i>Process rather than product</i>	<i>Student centered</i>
<i>Individual and group lessons including some daily direct teaching</i>		<i>Lesson openers/closers</i>
<i>A focus on math vocabulary</i>	<i>Start with concrete, move to pictorial, and only then to abstract</i>	
<i>Manipulatives and games</i>	<i>Literature,</i>	<i>Centers</i>
<i>Performance-based tasks</i>	<i>Project-based</i>	<i>Group learning</i>
<i>Problem solving</i>	<i>Real life problems</i>	<i>Practical application</i>
<i>Mental Mathematics</i>	<i>Debate</i>	<i>Journaling</i>
<i>Integration of technology including SMART Boards and Senteos, and on-line resources</i>		
<i>Differentiation strategies –parallel tasks, open-ended tasks and questions; multiple strategies</i>		
<i>Work with colleagues</i>	<i>Peer observations</i>	<i>Reading research</i>
<i>Better communication with students, teachers, parents</i>		

Student Engagement

<i>Setting goals</i>		
<i>Tracking their own scores and assessment & assessing what they do next</i>		
<i>Exploring/discovering</i>	<i>Developing personal strategies</i>	<i>Sharing student strategies</i>
<i>Discussing</i>	<i>Creating problems & solutions</i>	<i>Collaborating/working in groups</i>
<i>Struggling</i>	<i>Acting out problems</i>	<i>Reflecting</i>

Indicator:	Administrator observation of teaching practices
Evidence:	Comment sample from SAPDC administrator “Evidence of Success” reporting form

Planning

<i>Long range, unit and daily plans and course outcomes reflect revised P of S and UbD</i>	
<i>Planning based on outcomes not units, chapters or textbooks, and includes projects</i>	
<i>Math Menu planning</i>	<i>Sharing of SMART Board files</i>
<i>Collaboration – writing ‘I Can’ statements and student friendly outcomes</i>	
<i>Collaborative planning with Division</i>	<i>AISI teams working collaboratively on planning</i>
<i>Grade level meetings</i>	<i>Staff meeting/PLC PD time and sharing of ideas</i>

Assessment

<i>I Can statements/Posted outcomes</i>	<i>Outcome-based report card</i>	<i>Student self-assessment</i>
<i>Assessment for and of learning</i>	<i>Exit Slips</i>	<i>Professional discussions</i>
<i>Performance-based tasks</i>	<i>Use of rubrics</i>	<i>Portfolios</i>
<i>Differentiated assessment tasks</i>	<i>Much more varied methods of collecting assessment</i>	

Instructional Strategies

<i>Student-centered</i>	<i>Lots of manipulatives, hands-on</i>	<i>Real life problem based</i>
<i>High level questioning</i>	<i>Mental math</i>	<i>Focus on process skills</i>
<i>Differentiation</i>	<i>Cooperative Learning</i>	<i>Positive inquiry</i>
<i>Much discussion</i>	<i>Use of online resources</i>	<i>Journaling</i>

Student Engagement

<i>Students communicating/explaining learning in various ways</i>	<i>Using manipulatives</i>	<i>Workings in group</i>
<i>Reflective thinking</i>	<i>Integrating technology</i>	<i>Being leaders</i>
<i>Skip counting on playground</i>	<i>Problem solving</i>	<i>Discussing math</i>
<i>Visualizing</i>		<i>Using online resources</i>

Indicator:	Suggestions for professional development to support further learning
Evidence:	Comment sample from ARPDC Feedback form from regional sessions

Teachers

<i>Day, unit, year planning</i>	<i>Prioritizing outcomes</i>	
<i>Assessment</i>	<i>Project-based assessment</i>	<i>Reporting</i>
<i>Project-based learning</i>	<i>How to use manipulatives</i>	<i>Activities</i>
<i>Use of the Moodle</i>		
<i>More French resources and presenters</i>		
<i>More time and collaboration</i>	<i>Connections with other teachers</i>	
<i>Continued, ongoing support</i>	<i>Continued SAPDC PD</i>	
<i>More demonstration videos as to what a successful lesson would look like</i>		

Administrators

Follow up sessions for the next 5 – 6 years
Ongoing, progressively scheduled low cost PD

Parents

More in-depth sessions for parents
Communicate more with teacher
Notes from teachers explaining the Math

Indicator:	Suggestions for professional development to support further learning
Evidence:	Comment sample from ARPDC Feedback form from district sessions

Planning

Help in developing lesson, unit and long range plans and timeline
Backwards design *Sessions like this one through all grades and outcomes*

Assessment

Develop effective summative assessments for the 10-C course
Structure of assessment items → including assessment for learning items; Quizzes/Tests/Exams
More assessment exemplars *Time to create more check-ups* *How to evaluate*

Instructional Strategies

More sessions and time to work on concrete lesson development, projects, problem-solving questions, student led activities, hands on manipulatives, technology including SMART Board and Moodle, use of literature
Time to collaborate *Time to explore research, resources and sites*

SAPDC strategies and actions, observations and inferences, and reflections and recommendations for Grant Deliverables as they apply to implementation of the revised Mathematics Program of Studies during the 2009 – 2010 school year.

Strategies and Actions for Grant Deliverables	Observations and Inferences	Reflections and Recommendations
<p>1. The SAPDC used the \$75,000 base funding to add to, and maintain office staff to support the operational work of the consortium.</p> <p>2. As stipulated, the SAPDC designated 65% of their Alberta Education Regional Implementation Grant to support implementation of the revised Mathematics P of S over a three year period September 2008 through August 2011.</p> <p>2a. The SAPDC Mathematics Regional Advisory Committee consisted of 13 members representing each of the ten districts, rural and urban, and the various divisions in districts and schools including an Acting Director of Curriculum, Administrator Representative, teacher representatives, an ATA representative and SAPDC representatives including the Mathematics Implementation Support Teachers.</p> <p>The SAPDC worked closely with other regional consortia from sharing names of presenters and sharing sessions, to organizing the High School Mathematics Institutes.</p>	<p>Positions for the 2009-2010 year included Office Support Staff 1.5 FTE, 1 casual, and 1 part time workshop hostess and book-keeper.</p> <p>The SAPDC provided \$222,300 to support implementation of the revised Mathematics P of S from September 2009 through August 2010. In addition, the SAPDC allocated a carry forward of \$160,469 from the 2008-2009 allocation for a total of \$382,769</p> <p>The Committee provided input into the SAPDC Plan to support implementation of the revised Mathematics P of S, provided ongoing feedback based on district needs and lessons learned, and identified future needs.</p> <p>Sharing among consortia took place in various forms including provincial face-to-face meetings, video conferencing, Elluminate meetings, Wikis, and through the SAPDC Moodle site.</p>	<p>As the consortium has experienced considerable growth in all areas including the number of workshop offerings, meetings, and implementation support staff, as well as an increase in the record-keeping and reporting requirements for grants, it is recommended, as has been planned for the 2010-11 year, that the present office support staff allocation be maintained.</p> <p>After a review of the 2009-2010 budget and plans for the coming year, it is recommended that the SAPDC designate the recommended 65%, \$222,300, plus a carry forward of \$160,965 for a total of \$382,769 to support implementation of the revised Mathematics P of S for 2010-11.</p> <p>It is recommended, as has been planned for the 2010-11 year, that the Mathematics Advisory Committee continue to play an important role in implementation of the revised Mathematics P of S. Input from all stakeholder groups in the field is essential in meeting the regional needs of educators.</p> <p>In an effort to ensure more efficiency throughout the consortia, including but not limited to duplication of presenters and more efficient use of time and funds, etc., it is recommended, as has been planned for the 2010-11 year, that the SAPDC Program Coordinator, as well as Implementation Support Teachers, where applicable, continue to collaborate and coordinate with other consortia leads. For example, the names of excellent presenters will be shared so that every consortium does not have to do the leg work and money will be saved with presenters doing an Alberta tour.</p>

Strategies and Actions for Grant Deliverables	Observations and Inferences	Reflections and Recommendations
<p>2b. The SAPDC prepared and submitted a Regional Mathematics Implementation Plan including a work plan and budget to support implementation of the revised Mathematics P of S. The work plan included:</p> <ul style="list-style-type: none"> Action for all grant deliverables, specific goals and strategies as well as PD planned to date to provide implementation support opportunities to all Grades K – 12 Mathematics teachers, administrators and curriculum leaders in the SAPDC region. Programs were continually developed and added during the year and posted on the SAPDC web-site. Stakeholders and Alberta Education were encouraged to regularly check the web-site for the latest programming information. Quantitative and qualitative data from the previous year informed the plan to ensure continued successful implementation. 	<p>In developing an implementation plan SAPDC followed the PD Planning Cycle and implemented a UbD format.</p> <p>What constitutes “Evidence of Success” that the revised Mathematics P of S is being implemented effectively continued to be a topic of discussion among all SAPDC stakeholders. The indicators and evidence used in the SAPDC plan and report were based on the five questions related to evaluation* as outlined in The Guide to Comprehensive PD Planning, as specified by Guskey (2000), which follow:</p> <ol style="list-style-type: none"> What resources were provided to support the change? <ul style="list-style-type: none"> Number and summary of regional and district sessions What is the overall response of participants to the program? <ul style="list-style-type: none"> Number of participants Percentage of participants satisfied with regional and district sessions District curriculum leader satisfaction with district sessions What did participants learn? <ul style="list-style-type: none"> Percentage of participants’intent to change their practice Percentage of participants comfortable with teaching the revised P of S Percentage of participants implementing performance-based and formative assessment Comments identifying areas of need Suggestions for PD to support further learning Are participants applying the new knowledge and skills? <ul style="list-style-type: none"> Participant comments re: their changes of practice Administrator observation of changes in teaching practices Did the program influence practice and, therefore, student learning? <ul style="list-style-type: none"> Participant comments re: change of practice Administrator observation of teaching practices <ul style="list-style-type: none"> NOTE that the questions and responses relate to evidence that SAPDC is able to collect 	<p>It is recommended, as has been implemented for the 2010-11 year, that the SAPDC Regional Mathematics Implementation Plan continue to follow the PD Planning Cycle and a UbD format.</p>

Strategies and Actions for Grant Deliverables	Observations and Inferences	Reflections and Recommendations
	<p>In developing the SAPDC regional PD plan to support implementation of the revised Mathematics P of S in Zone 6 it was important to consider the SAPDC regional context. Distance and scarcity provided a challenge in providing professional development learning opportunities. To address these issues SAPDC provided:</p> <ul style="list-style-type: none"> • regional program offerings on both the west and east side of the region • alternative forms of PD learning opportunities and delivery formats, including distributed learning strategies • support to districts in the form of district sessions delivered by SAPDC Implementation Support Teachers. While this model provided greater flexibility to districts, it also required the district responsibility to create a Mathematics implementation plan. 	<p>It is recommended, as has been planned for the 2010-11 year, that the SAPDC continue to address the distance and scarcity issue in planning PD. PD plans will include offering sessions throughout the region, alternate forms of PD delivery, and Mathematics Implementation Support Teachers to work with educators in the all districts.</p>

<p>Strategies and Actions for Grant Deliverables</p> <p>Goal #1: Support curriculum implementation</p> <p>Strategy 1:1: Regional support of educators of Grades 3, 6, 9 & 10 in preparation for 2010-2011 pre-implementation</p> <p>Strategy 1:2 Regional support for educators for which implementation of the revised Mathematics Program of Studies is already mandatory</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of regional sessions • Number of participants • Percentage of participants satisfied with regional sessions • Participants' intent to change their practice • Suggestions for professional development to support further learning • Percentage of stakeholders comfortable with teaching the revised P of S • Greatest areas of need • Percentage of stakeholders using performance based, and formative assessment • Greatest areas of assessment needs • Participant change of practice • Administrator observation of teaching practices • Suggestions to support further learning <p>Support includes: Capacity building Support for Administrators Delivery via Distributed Learning</p>	<p>Observations and Inferences</p> <p>In the 09-10 year the number of regional sessions offered was 95 with a total of 2591 participants; an increase from 45 sessions and 1801 participants in 08-09.</p> <p>In the 09-10 year the percentage of participants planning to apply the information learned from regional sessions into their practice was 98.59%; an increase from 97% in 08-09.</p> <p>In addition, 4 regional sessions applicable, but not specific to Mathematics were held on planning, 4 on assessment, 3 on differentiation and 24 on various technologies.</p> <p>In the 09-10 year the percentage of participants satisfied with regional sessions was 98.71%; an increase from 96.5% in 08-09.</p> <p>The 09-10 year needs assessment data regarding teacher confidence with regards to their planning and teaching of the revised P of S revealed high levels of responses in the 'comfortable' categories. 92% of teachers indicated they were confident with the content, 87% with the process skills and 87% with instructional strategies. In the 08-09 year teacher confidence was even higher than in the 09-10 year.</p> <p>As well, even though educators reported that they are implementing strategies which reflect the revised Mathematics P of S many indicated that "most of the comfortables are on the low end" and that "more time and professional learning opportunities are needed." Data from both regional and district sessions also indicated educators are in need of continued, ongoing support.</p> <p>Further evidence to validate the need for continued, ongoing support is that 77.02% of Mathematics teachers indicated on the Mathematics survey that they do not have a background in Mathematics; that Mathematics was not their area of study in university.</p>	<p>Reflections and Recommendations</p> <p>It is interesting to note that teachers teaching the revised P of S indicated they were more comfortable overall in the 08-09 year than the 09-10 year. Discussions with district leaders indicate they feel that 'the more educators are learning the more they are finding out what they don't know', and that both teachers and administrators are in need of continued, ongoing support.</p> <p>It is recommended, as is being planned for the 2010-11 year. that ongoing professional learning support be continued.</p>
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<p>Strategies and Actions for Grant Deliverables Goal #1: (Con't) Support curriculum implementation</p> <p>Strategy 1:1: Regional support of educators of Grades 3, 6, 9, & 10 in preparation for 2010-2011 pre-implementation</p> <p>Strategy 1:2 Regional support for educators for which implementation of the revised Mathematics Program of Studies is already mandatory</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of regional sessions • Number of participants • Percentage of participants satisfied with regional sessions • Participants' intent to change their practice • Suggestions for professional development to support further learning • Percentage of stakeholders comfortable with teaching areas of the revised P of S • Greatest areas of need • Percentage of stakeholders using performance based, and formative assessment • Greatest areas of assessment needs • Participant change of practice • Administrator observation of teaching practices • Suggestions to support further learning <p>Support includes: Capacity building Support for Administrators Delivery via Distributed Learning</p>	<p>Observations and Inferences</p> <p>The greatest areas of need identified in 09-10, as per the SAPDC year end Mathematics survey, were effective integration of technology and problem solving. As well, respondents indicated the highest level of need specific to process skills as well as instructional strategies was problem solving and application of technology. The top PD needs identified in 08-09 in the SAPDC annual survey were Math and embedding technology tools into the curriculum.</p> <p>Addressing diversity/differentiation & critical thinking were also identified as areas of need in both years.</p> <p>Other top priorities identified in 09-10 for further professional learning included project-based and inquiry-based learning, use of SMART Boards, Learn Alberta, and Moodle.</p> <p>The greatest assessment need identified in 09-10 was designing performance/project based assessments. This need was identified as the number one need in 08-09 as well, but it is identified as a much higher need in 09-10 at 73.25%. Long range and unit planning to ensure alignment with learner outcomes was also identified as a need in both years.</p> <p>Data from 09-10 indicated that the top factors which have positively affected teacher ability to implement the revised P of S, and the preferred form of PD, was collaborative planning such as in PLCs, classroom demonstration lessons and workshops. Data from 08-09 identified these as top factors as well. Preferred delivery formats identified include division PD days (52%) and full day during school workshops (52%)</p>	<p>Reflections and Recommendations</p> <p>It is recommended, as is being planned for the 2010-11 year, that professional learning opportunities offered continue to reflect the needs and top priorities as identified. It is to be noted that a strong theme that has emerged in both the 08-09 year and the 09-10- year is the need for support in the effective integration of technology. It is recommended, as is being explored for the 2010-11 year, that professional learning opportunities be provided in this area.</p> <p>As is being planned in 2010-11, SAPDC will continue to address differentiation as well as adding a study group on an NCTM resource related to First Nations learners in Mathematics.</p> <p>It is recommended, as is being planned for the 2010-11 year, that Implementation Support Teachers continue to integrate assessment strategies into all Mathematics programming.</p> <p>It is recommended, as is being planned for the 2010-11 year, that AAC and other assessment related professional learning opportunities continue to be explored.</p>
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Strategies and Actions for Grant Deliverables Goal #1: (Con't) Support curriculum implementation	Observations and Inferences	Reflections and Recommendations
<p>Strategy 1:1: Regional support of educators of Grades 3, 6, 9, & 10 in preparation for 2010-2011 pre-implementation</p> <p>Strategy 1:2 Regional support for educators for which implementation of the revised Mathematics Program of Studies is already mandatory</p> <p>Indicators:</p> <ul style="list-style-type: none"> • Number of regional sessions • Number of participants • Percentage of participants satisfied with regional sessions • Participants' intent to change their practice • Suggestions for professional development to support further learning • Percentage of stakeholders comfortable with teaching areas of the revised P of S • Greatest areas of need • Percentage of stakeholders using performance based, and formative assessment • Greatest areas of assessment needs • Participant change of practice • Administrator observation of teaching practices • Suggestions to support further learning <p>Support includes: Capacity building Support for Administrators Delivery via Distributed Learning</p>	<p>A comparison of data from districts implementing focused and regular job-embedded professional learning such as collaborative work groups and PLCs, as well as promoting attendance at SAPDC sessions, suggests teachers are experiencing a higher comfort level with implementing the P of S, than teachers in other districts.</p> <p>The sampling of comments from session participants indicate how they have changed their practice reflected the revised Mathematics Program of Studies. (see pg. 8)</p> <p>The sampling of comments from administrators indicates what practices in the areas of planning, assessment, instructional strategies and student engagement that they are observing in the classroom reflected the revised Mathematics Program of Studies. (see pg. 8)</p> <p>In the 09-10 year parent comments indicated the need and desire to be more informed about the revised Mathematics P of S.</p>	<p>It is recommended, as is being planned for the 2010-11 year, that job-embedded professional learning opportunities continue to be encouraged at the district level, and that SAPDC continue to explore job-embedded professional learning opportunities as well as offer regional sessions.</p> <p>It is recommended, as is being planned for the 2010-11 year, that SAPDC continue to explore and capture teacher practices in classrooms perhaps with video footage.</p> <p>It is recommended, as is being planned for the 2010-11 year, that SAPDC continue to provide opportunities which will continue to expand administrators' familiarity with the revised P of S. As well, the Math Admin ToolKit will be released in the fall, 2010 to support administrators as instructional leaders.</p> <p>It is recommended, as is being planned for the 2010-11 year, that SAPDC continue to provide learning opportunities for parents.</p>

Strategies and Actions for Grant Deliverables	Observations and Inferences	Reflections and Recommendations
<p>Goal #2: Support district implementation plans/regional needs</p> <p>Strategy 2:1 Provide district delivered support via SAPDC Implementation Support Teachers</p> <p>Indicators</p> <ul style="list-style-type: none"> • Number of district sessions • Number of participants • Percentage of participants' intent to change their practice • Percentage of participants satisfied with district sessions • District curriculum • leader satisfaction with district sessions • Suggestions for professional development to support further learning <p>Support includes: Capacity building Support for Administrators Delivery via Distributed Learning</p>	<p>A job-embedded model was used to provide district support during the 09-10. Two Mathematics Implementation Support Teachers were seconded to work “elbow to elbow” with teachers in the districts. One support teacher was hired to provide support, in consultation with district curriculum leaders, to Grades 4 – 9 teachers in the districts, and the other to work with curriculum leaders and teachers at the high school level.</p> <p>Seven of the ten districts took advantage of the maximum number of 4 sessions per district, of the Grades 4 – 9 sessions with a total of 42 sessions and 437 participants. Some districts requested, and were allocated more time.</p> <p>Six of the ten districts took advantage of the maximum number of 2 sessions per district of the high school sessions with a total of 14 sessions and 90 participants.</p> <p>In addition, the SAPDC Technology Implementation Teacher offered 10 district sessions applicable, but not specific to Mathematics, on various technologies with a total of 140 participants.</p> <p>Data from a variety of indicators was very positive and has indicated that the Implementation Support Teacher model is effective for implementation support when embedded within a larger plan.</p> <p>The percentage of participants planning to apply the information learned at district sessions was 100%, as was overall satisfaction of the sessions.</p> <p>Data collection and collation was extensive. Dedicated office support to assist with the collection and organizing of district session data assisted greatly.</p>	<p>Reflections and Recommendations</p> <p>Research indicates that ongoing, job-embedded PD is a more effective approach to enhance professional learning than the one-shot sessions. With the Teacher Implementation Support Teacher model much of the work done with teachers was built on plans districts had in place and thus, an extension of what the teachers were already doing in their districts.</p> <p>It is recommended, as is being implemented for the 2010-11 year, that the Implementation Support Teacher model continue. In addition, based on the very positive data gained from the Social Studies Implementation Teacher work with teaching a class and posting daily lessons, reflections, etc., on the Moodle, it is recommended, as is being planned for the 2010-11 year, that this job-embedded PD model be implemented with the Mathematics Implementation Support Teachers for 10C.</p> <p>Further to the recommendation that SAPDC continue to explore job-embedded practices it is also recommended, as is being planned for the 2010-11 year, that the SAPDC Mathematics Moodle site not only house the work of the Implementation Support Teachers but also be extended to be a ‘one stop shop’ for Mathematics teachers to locate Mathematics resources.</p> <p>As data collection of district sessions was extensive, it is recommended, as is being planned for the 2010-11 year, that office support continue to be dedicated to assist with managing this information and that the SAPDC move to use of on-line evaluations.</p>

Strategies and Actions for Grant Deliverables	Observation and Inferences	Reflections and Recommendations
<p>2c. As Mathematics is not part of the AB ED business plan this deliverable is not applicable to the Mathematics Implementation Plan.</p> <p>2d. The SAPDC provided many opportunities for input and collaboration regarding regional and district needs, as well as a wide variety of professional development opportunities and delivery formats. Specific strategies and the wide variety of opportunities are outlined throughout the plan.</p> <ul style="list-style-type: none"> Capacity building was addressed with a wide variety of ongoing PD opportunities. Support for development of administrator instructional leadership was incorporated in regional sessions offered. 	<p>While the Alberta Education grant deliverables focused on preparing target audience teachers for pre-implementation and mandatory implementation years, feedback from teachers and district leaders, as well as the research on successful implementation indicated that implementation support was also necessary during the year of implementation as well as in subsequent years. Additional support has been required and requested in the year of implementation and beyond.</p> <p>Capacity building was mainly addressed through the SAPDC's Implementation Support Teacher model. The Implementation Support Teachers, acting as leads, shared information and worked with teachers at district sessions, collaborative work sessions and cohort groups. The work the Implementation Teachers did in the sessions was based on work being done within the districts and then taken back by participants to teachers, grade level meetings, etc., in the districts.</p> <p>Data indicated that administrators seldom attended the Mathematics sessions offered. However, administrators who have attended instructional leadership sessions have continued to request additional support in their role as a Mathematics instructional leader.</p>	<p>It is recommended, as is being planned for the 2010-11 year, that SAPDC continue to provide additional support required and requested in the year of implementation and beyond. It is also recommended, as is being planned for the 2010-11 year, that decisions on sessions continue to be informed by feedback from teacher participants and district curriculum leaders</p> <p>Through the ongoing professional development provided by SAPDC, whether in the form of a workshop series, cohort groups, a series of webinars, or districts working together, the SAPDC Mathematics Implementation Plan, as is the case with the 2010-11 Implementation Plan, focuses on establishing communities of teaching and learning. It is through ongoing rich, reflective discussion that deep learning takes hold.</p> <p>Teachers, on session and survey feedback forms, and curriculum leaders, on post session reports, speak highly of the work of the Implementation Support Teachers in supporting and extending goals in the districts. It is recommended, as is being planned for the 2010-11 year, that this model continue.</p> <p>It is recommended, as is being planned for the 2010-11 year, that SAPDC continue to provide sessions specific to enhancing administrators' knowledge of the revised Mathematics P of S. The release of the Math ToolKit for Administrators will also provide support,</p>

<p>Strategies and Action for Grant Deliverables</p> <ul style="list-style-type: none"> Emerging technologies were incorporated into sessions, and alternate delivery methods offered to build capacity of participants and to allow for increased variety for adult learning. <p>2e. SAPDC worked with district curriculum leaders in the fall using a document developed by SAPDC which incorporates the PD Planning Cycle from the Guide to Comprehensive PD Planning.</p>	<p>Observations and Inferences</p> <p>Emerging technologies including SMART Boards, senteos, etc, were incorporated into sessions.</p> <p>As well, alternate delivery methods including webinars and video conferencing, were offered. Many sessions were offered both face to face and via VC or webinar. 388 participants took advantage of VC or webinar opportunities in 26 Mathematics sessions. 32 participants took advantage of a VC or webinar in 7 of the other regional sessions that were applicable, but not directly related to Mathematics.</p> <p>Delivery via VC and/or webinars was relatively new in the 09-10 year and often neither presenters nor participants were familiar with the technology and did not have the expertise to participate. As such, a great deal of responsibility was placed both on SAPDC staff, as well as districts, to assist with participant technology needs in accessing sessions. The time required to manage a technology mediated session became less with increased familiarity but it was still substantial compared to a face-to-face session. Even with supports in place to assist in building participant capacity, data indicated such forms of delivery were not rated as preferred delivery formats on the Mathematics survey.</p> <p>District leaders were very open to discussing their professional development plans with SAPDC. Districts varied greatly in their PD planning processes and plans. While some districts had clear and comprehensive PD plans with regards to Mathematics implementation, many were still at the beginning stages of using the principles found within the <i>Comprehensive Guide to PD Planning</i> to inform decisions about Mathematics support.</p>	<p>Reflections and Recommendations</p> <p>As beneficial as research indicates that “ongoing,” rather than the one-shot professional development is, ongoing demands, often in multiple areas, puts a strain on the education system in terms of budget, teacher time away from the classroom, availability of substitute teachers, and PD ‘fatigue’ among teachers. Alternate delivery modes can minimize such challenges by providing an avenue whereby teachers can access professional learning where they do not have to leave their classroom and at a lower cost. Alternate delivery modes also allow for increased variety for adult learning.</p> <p>Such being the case, it is recommended, as is planned for the 2010-11 year, that SAPDC continue to offer alternate forms of delivery, to build the capacity of educators to use technology mediated sessions, and that technical assistance at the district level for each technology mediated session be in place.</p> <p>It is also important to continue, as will be done in the 2010-11 year, to weigh the advantages/disadvantages of not only the cost but the effectiveness of the PD to determine if the use of the technology is a good match for the desired end result.</p> <p>It is recommended, as is being planned for the 2010-11 year, that:</p> <ul style="list-style-type: none"> the Program Coordinator continue to meet with district leaders in the spring and fall to work through the SAPDC Planning Cycle Guide and model how the PD cycle can be used to develop a district PD plan the SAPDC PD Planning Cycle Guide continue to be highlighted in all implementation work.
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<p>Strategies and Actions for Grant Deliverables</p> <p>2f. The first meeting with Alberta Education Lead Program Managers, Executive Directors and the Regional Mathematics Committee was held on September 11th, 2009 in Red Deer. The purpose of the meeting was to assist with input and direction for the development of the plan to support implementation of the Mathematics P of S for 2009-2010.</p> <p>Ongoing meetings of the Executive Directors including face-to-face, video conferencing and meetings via Elluminate and telephone were held throughout the year.</p> <p>2g. As part of planning and reporting SAPDC had ongoing communication with district leaders, as well as structured meetings, to discuss processes and tools SAPDC has in place which could assist districts with the collection, as well as tracking and reporting, of “evidence of success” of effective implementation.</p>	<p>Observation and Inferences</p> <p>The SAPDC Program Coordinator participated in provincial ARPDC meetings, and contact continued throughout the year with other consortia leaders face to face, via e-mail, Elluminate, VC, and the Mathematics Moodle site.</p> <p>Discussions as to what constitutes “Evidence of Success” of implementation of the revised Mathematics P of S continued to be a main topic.</p> <p>Consortia supported the development of district Mathematics plans by:</p> <ul style="list-style-type: none"> • making district visits in May/June and the fall to share processes and tools as well as collecting data which could assist districts with their planning and reporting. • involving curriculum leaders in the SAPDC process by sharing collated participant feedback information for each district session, having curriculum leaders review the information and report back as to how the session served their district needs and plan. 	<p>Reflections and Recommendations</p> <p>It is recommended, as is being planned and implemented in the 2010-11 year, that collaborative discussions with Alberta Education, Executive Directors, and regional committees re: direction for the development of plans to support implementation of revised curriculum and/or AB Ed business plans, with an emphasis on what constitutes “Evidence of Success,” continue. It is recommended that use of a backwards design approach applied to future grants would be helpful in setting direction and clarifying in advance the data that needs to be gathered for reporting purposes.</p> <p>It is recommended, as is being implemented and planned for the 2010-11 year, that SAPDC continue to share data gained from the SAPDC/Zone 6 bi-annual needs assessment and/or the Mathematics Survey, the ARPDC Feedback forms, and Evidence of Success reporting with district leaders at the end of the year and the beginning of the next. It is also recommended, as is being implemented and planned for the 2010-11 year, that the SAPDC continue to work with districts to use the data in determining direction and planning for each coming year.</p> <p>It is recommended, as is being planned for the 2010-11 year, that the general data and comments from teacher participants on the ARPDC Feedback form at the end of each session, as well as district specific “Evidence of Success” participant comments be made available throughout the year to district curriculum leaders who wish to receive them. The data could be used as formative feedback to assist district leaders in determining areas where teachers need more support.</p>
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Strategies and Actions for Grant Deliverables	Observation and Inferences	Reflections and Recommendations
<p>2h. The SAPDC collaborated with other PD providers in the planning and development of various projects throughout the year.</p> <p>2i. The 2009-2010 report has addressed all grant deliverables that pertain to implementation of the Mathematics P of S including a work plan which contains the following:</p> <ul style="list-style-type: none"> data from key indicators relative to evidence of success, observations and inferences, reflections and recommendations from implementation features supported and accomplished. 	<p>A Provincial Demonstration Project, for beginning teachers on differentiation in the classroom was delivered through collaboration from various stakeholders including consortia, AAC, 2Learn and the ATA. It was delivered via Elluminate and cached webinars. The SAPDC was the lead consortia working on the project.</p> <p>As an extension of the Provincial Demonstration Project the SAPDC hosted a Mathematics cohort where Mathematics Support Teachers worked with beginning teachers at Grades 4 through high school. The cohort attended Marian Small's regional session and then studied Marain's books on differentiation in 4 follow up face to face and VC sessions. Attendance data and leaders of the cohort reported that the face to face sessions were better attended than the Elluminate ones.</p> <p>The SAPDC Program Coordinator attended district ATA PD meetings contributing to their planning and development of program offerings and supports.</p> <p>Data that the SAPDC collected on professional learning opportunities offered and attended, and indicators relative to "Evidence of Success," as well as observations and inferences have all indicated that, although there is the need for continued, ongoing support:</p> <ul style="list-style-type: none"> as a result of the professional learning opportunities that the SAPDC, together with other PD providers, have offered in 09-10, educators have indicated that their new knowledge and skills are being applied. As such, it can be inferred that the learning opportunities have been effective, professional practice has been enhanced, capacity built and ultimately, student learning promoted & enhanced. 	<p>SAPDC recommends, as is being planned for the 2010-11 year, that a similar Provincial project on differentiation for beginning teachers presented by a variety of PD providers and presented via Elluminate and cached webinars be continued.</p> <p>It is also recommended, as is being planned for the 2010-11 year, that a regional cohort that focuses on differentiation in Mathematics continues and that it be delivered both face to face and via VC rather than Elluminate.</p> <p>It is recommended, as is being planned for the 2010-11 year, that the SAPDC Program Coordinator continue to attend district ATA PD meetings, and explore ways to collaborate with other PD providers.</p> <p>It is recommended, as is being planned for the 2010-11 year, that a variety of professional learning opportunities continue to be provided to teachers, administrators and curriculum leaders implementing the revised Mathematics P of S.</p> <p>It is recommended, as is being planned for the 2010-11 year, that documentation which will provide "evidence of success" continue to be explored.</p>

	<p>Together Marg, Bonnie, Mary Jo and Ken collaborated with jurisdiction leaders and teachers throughout southern Alberta to identify specific needs with respect to Mathematics implementation. Bonnie provided district delivered sessions and support for regional opportunities for teachers Grades 4 through 9. MaryJo Rawleigh provided support for high school teachers also in district delivered sessions and for regional sessions. David provided the majority of support for regionally delivered learning opportunities with a series of workshops for the pre-implementation Grades 3, 6, 9 and 10-C, as well as some regional workshops for teachers in Grades K-1, 2, 4, 5, 7, and 8. Additional external consultants were contracted as needs were identified.</p>	<p>recommended, as is being planned for the 2010-11 year, that office support be continued to assist with providing service to districts, other consortia, other PD providers, etc., and in tracking the extensive evidence of successful implementation.</p> <p>Based on positive data that indicates success of the SAPDC Mathematics Implementation Support Teacher Model, it is recommended, as is being planned for the 2010-11 year, that this model continue to be incorporated, and extended, into the Mathematics implementation plan. It is recommended that the Mathematics Implementation Teachers continue to provide regional and district sessions as well as be extended to include teaching a class and posting lessons, reflections, etc., on the Moodle.</p> <p>As it is anticipated that the need for distributed learning opportunities will continue to increase and the 2010-11 Regional Mathematics Implementation Plan incorporates continued use of alternate forms of professional development delivery including technology mediated forms of professional learning, it is recommended that technical assistance support be continued as well.</p>
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APPENDIX A

Goal #1: Support curriculum implementation.

- Strategy 1:1: Regional support of educators of Grades 3,6,9 & 10 in preparation for 2010 -2011 pre-implementation
Capacity building, administrator support and delivery via distributed learning incorporated.
- Strategy 1:2: Regional support for educators for which implementation of the revised Program of Studies is already mandatory.
Capacity building, administrator support, and delivery via distributed learning incorporated.

Indicator: Number of workshops / Number of participants
Source of Evidence: List of workshops / Attendance data

Focus		Session/Presenter	No. of participants	Date	Location
Grades 3, 6, 9, 10	Ongoing Support				
▶		Grade 3 Math Series (Day 1 of 4) – David DeCoste	66	14-Sept-09	Leth
▶		Grade 3 Math Series (Day 2 of 4) – DeCoste	66	15-Sept-09	Leth
▶		Grade 6 Math Series (Day 1 of 4) – DeCoste	30	16-Sept-09	Leth
▶		Grade 6 Math Series (Day 2 of 4) – DeCoste	30	17-Sept-09	Leth
▶		Grade 10 Revised P of S – Christine Henzel (VC from Edmonton to Lethbridge & Medicine Hat)	33	29-Sept-09	Leth/ MH
▶		Grade 3 Math Series (Day 1 of 4) – DeCoste	69	19-Oct-09	MH
▶		Grade 3 Math Series (Day 2 of 4) – DeCoste	69	20-Oct-09	MH
▶		Grade 6 Math Series (Day 1 of 4) – DeCoste	36	21-Oct-09	MH
▶		Grade 6 Math Series (Day 2 of 4) – DeCoste	36	22-Oct-09	MH
▶		Division II – Math Collaborative Work Sessions – Bonnie Layton	2	11-Jan-10	Leth
▶		Division III – Math Collaborative Work Sessions – Layton	5	12-Jan-10	Leth
▶		Grade 6 Provincial Achievement Exam Pilot Test – Rota – AB ED	43	21-Jan-10	Leth
▶		Grade 9 Provincial Achievement Exam Pilot Test – Rota – AB ED	28	21-Jan-10	Leth
▶		Grade 6 Provincial Achievement Exam Pilot Test – Rota – AB ED	13	22-Jan-10	MH
▶		Grade 9 Provincial Achievement Exam Pilot Test – Rota – AB ED	7	22-Jan-10	MH
▶		Grade 3 Math Series (Day 3 of 4) – DeCoste	81	25-Jan-10	Leth
▶		Provincial High School Math Institute (VC from Calgary to Leth and MH)	92	25-Jan-10	Leth/MH
▶		Grade 3 Math Series (Day 4 of 3) – DeCoste	81	26-Jan-10	Leth
▶		Grade 6 Math Series (Day 3 of 4) – DeCoste	30	27-Jan-10	Leth
▶		Grade 6 Math Series (Day 4 of 4) – DeCoste	30	28-Jan-10	Leth
▶		Grade 3 Math Series (Day 3 of 4) – DeCoste	69	08-Feb-10	MH
▶		Grade 3 Math Series (Day 4 of 4) – DeCoste	69	09-Feb-10	MH
▶		Division II – Math Collaborative Work Sessions – Layton	14	09-Feb-10	Leth
▶		Division III & Gr 10 – Math Collaborative Work Sessions – Bonnie Layton/Mary Jo Rawleigh	9	10-Feb-10	Leth
▶		Grade 6 Math Series (Day 3 of 3) – DeCoste	36	10-Feb-10	Leth/MH
▶		Grade 6 Math Series (Day 4 of 4) – DeCoste	36	11-Feb-10	MH

▶		High School Math Power Point Presentation – Rawleigh	3+ 7VC	10-Mar-10	Leth
▶		Grade 3 Math PAT 2010 AM – Deanna Weins	13+31VC	11-Mar-10	Leth
▶		Grade 3 Math PAT 2010 PM – Weins	12+8VC	11-Mar-10	Leth
▶		Division II – Math Collaborative Work Sessions – Layton	14	22-Mar-10	Leth
▶		Division III – Math Collaborative Work Sessions – Layton	9	23-Mar-10	Leth
▶		Grade 10 – Math Collaborative Work Sessions – Rawleigh	7	23-Mar-10	Leth
▶		Grade 9 Math Series (Day 1 of 3) – DeCoste	29	24-Mar-10	Leth
▶		Grade 9 Math Series (Day 2 of 3) – DeCoste	29	25-Mar-10	Leth
▶		Division II – Math Collaborative Work Sessions – Layton	19	12-Apr-10	Leth
▶		Division III – Math Collaborative Work Sessions – Layton	8	12-Apr-10	Leth
▶		Grade 10 – Math Collaborative Work Sessions – Rawleigh	7	12-Apr-10	Leth
▶		Division I – Math Games and Manipulatives – Chris Kuly	40	21-Apr-10	Leth
▶		Division I – Math Games and Manipulatives – Kuly	39	22-Apr-10	MH
▶		Grade 9 Math Series (Day 1 of 3) – DeCoste	23	28-Apr-10	MH
▶		Grade 9 Math Series (Day 2 of 3) – DeCoste	23	29-Apr-10	MH
▶		Division II – Math Collaborative Work Sessions – Layton	16	10-May-10	Leth
▶		Division III – Math Collaborative Work Sessions – Layton	10	10-May-10	Leth
▶		Grade 10 – Math Collaborative Work Sessions – Rawleigh	7	10-May-10	Leth
▶		Grade 9 Math Series (Day 3 of 3) – DeCoste	23	17-May-10	MH
▶		Grade K-3 Math – Number Sense – DeCoste	42	18-May-10	Magrath
▶		Grade 9 Math Series (Day 3 of 3) – DeCoste	29	19-May-10	Leth
▶		What is my Child Learning in Math K-9 – Layton	20	19-May-10	Leth
▶		What is my Child Learning in Math HS – Rawleigh	6	19-May-10	Leth
▶		Grade 9 Math Planning – DeCoste	20	31-May-10	MH
▶		Grade 9 -10 Math transition – DeCoste	15	01-June-10	MH
▶		Grade 9 Math Planning – DeCoste	16	02-June-10	Leth
▶		Grade 9 -10 Math transition – DeCoste	14	03-June-10	Leth
▶		What is my Child Learning in Math – Layton and Rawleigh	14	15-Jun-10	MH
▶		Orchestrating the Experience in Math 10-3 - Scammell	39	17-June-10	Leth
▶		Provincial High School Institute (VC from Calgary to Lethbridge and Medicine Hat)	39	22-June-10	Leth/MH
	▶	Grade 2 Math Series (Day 1 of 2) – David DeCoste	38	09-Nov-09	MH
	▶	Grade 2 Math Series (Day 2 of 2) – DeCoste	38	10-Nov-09	MH
	▶	Grade 5 Math Series (Day 1 of 2) – DeCoste	20	12-Nov-09	MH
	▶	Grade 5 Math Series (Day 2 of 2) – DeCoste	20	13-Nov-09	MH
	▶	Grade 2 Math Series (Day 1 of 2) – DeCoste	56	30-Nov-09	Leth
	▶	Grade 2 Math Series (Day 2 of 2) – DeCoste	56	01-Dec-09	Leth
	▶	Grade 5 Math Series (Day 1 of 2) – DeCoste	41	02-Dec-09	Leth
	▶	Grade 5 Math Series (Day 2 of 2) – DeCoste	41	03-Dec-09	Leth
	▶	New to Kindergarten and Grade 1 Math Series – DeCoste	40	04-Dec-09	Leth
	▶	New to Grade 4 Math – DeCoste	18	29-Jan-09	Leth
	▶	New to Kindergarten and Grade 1 Math Series – DeCoste	17	12-Feb-10	MH

▶	▶	South Western and South Eastern Alberta Teachers' Convention – Rawleigh	25 32	Feb-10	Leth MH
▶	▶	South Western and South Eastern Alberta Teachers' Convention – Layton	15 17	Feb-10	Leth MH
	▶	Grade 8 Math Series (Day 1 of 2) – DeCoste	20	22-Mar-10	Leth
	▶	Grade 8 Math Series (Day 2 of 2) – DeCoste	20	23-Mar-10	Leth
	▶	New to Grade 7 Math – DeCoste	4	26-Mar-10	Leth
	▶	Grade 8 Math Series (Day 1 of 2) – DeCoste	14	26-Apr-10	MH
	▶	Grade 8 Math Series (Day 2 of 2) – DeCoste	14	27-Apr-10	MH
	▶	New to Grade 4 Math – DeCoste	4	30-Apr-10	MH
	▶	New to Grade 7 Math – DeCoste	2	18-May-10	MH
	▶	Math Grade 4 – DeCoste	30	4-Jun-10	Brooks
▶	▶	Instructional Leadership in Math – DeCoste	24	23-Oct-09	MH
▶	▶	Math – Differentiation in Middle/HS – Part 1 – Marian Small	33	05-Nov-09	Leth
▶	▶	15 Ways to Fix Broken Grades – Ken O'Connor – Webinar # 1	17	06-Nov-09	Leth
▶	▶	15 Ways to Fix Broken Grades – O'Connor – Webinar # 2	17	09-Nov-09	Leth
▶	▶	Math Toolkit – David DeCoste and Sherry Bennett	2	11-Nov-09	Leth
▶	▶	Differentiated Instruction Jr/Sr High – Kathy Nunley	77	16-Nov-09	Leth
▶	▶	15 Ways to Fix Broken Grades – O'Connor – Webinar # 3	17	16-Nov-09	Leth
▶	▶	Differentiated Instruction Elementary– Kathy Nunley	82	17-Nov-09	Leth
▶	▶	15 Ways to Fix Broken Grades – O'Connor – Webinar # 4	17	23-Nov-09	Leth
▶	▶	15 Ways to Fix Broken Grades – O'Connor – Webinar # 5	17	07-Dec-09	Leth
▶	▶	15 Ways to Fix Broken Grades – O'Connor – Webinar # 6	17	14-Dec-09	Leth
▶	▶	Differentiation in Grades 3 – 6 – Small	44	11-Jan-10	Leth
▶	▶	Differentiation in Grades 3 – 6 – Small	44	12-Jan-10	Leth
▶	▶	Differentiation Middle/High School – Part 2 – Small – Webinar	33	08-Feb-10	Leth
▶	▶	Differentiation Middle/High School – Part 3 – Small	33	13-Apr-10	Leth

APPENDIX B

Goal #2: Support district implementation plans/regional needs

Strategy 2:1: Provide district delivered support via SAPDC Implementation Support Teachers

Grades 4 – 9 Implementation Support Teacher, Bonnie Layton

Jurisdiction	SAPDC Implementation Support Teacher district days and attendance	No. of district sessions	No. of participants
Grasslands Regional Division	Grade 7/8 overview of curriculum, collaborative planning using backwards design Grade 7 collaborative planning using backwards design Grade 4 using manipulatives Grade 5 long range planning and using manipulatives Grade 7 collaborative planning using backwards design	5	6 3 14 11 3
Holy Spirit Catholic Schools	Grade 4 using technology, resource sharing, Q and A, time for sharing Grade 6 PAT update, using manipulatives, technology Jr High overview of curriculum changes Grade 5 using children's literature, smart responders, time for collaborative work Gr 6 Mathematics literature Grade 5 Mathematics literature Jr. High manipulatives	7	10 12 12 12 13 13 9
Horizon School Division	Teaching using the process skills (problem solving, manipulatives, and technology), collaborative planning	1	25
Lethbridge School District	Grade 6/7/8 instructional strategies, teaching using the process skills (problem solving, manipulatives, technology) SMART technologies Substitute teachers	3	21 12 11
Medicine Hat Catholic Schools	Grade 6/7/8 teaching through problem solving Grade 7/8 using manipulatives Grade 4 using manipulatives Grade 5/6 using manipulatives	4	8 5 8 15
Medicine Hat School District	Gr 7/8 problem solving (combined session with PRRD) Gr 4/5 teaching through problem solving (combined session with PRRD)	2	14 14
Palliser Regional Division	Grade 5 manipulatives Grade 7 manipulatives Gr 5 problem solving Grade 4/5 writing in mathematics	4	8 3 28 26
Prairie Rose Regional Division	Planning meeting with MHSD Mathematics 4/5/6 review & manipulatives (combined session with MHSD) Mathematics 7/8/9 review & manipulatives (combined session with MHSD) Gr 9 teaching through problem solving	4	10 9 4 3
Westwind School Division	Planning meeting Smart Board for lead teachers Grade 7/8/9 curriculum planning Grade 4/5/6 curriculum planning Technology in Div II Technology in Div III	6	10 11 12 13 11 8
Livingstone Range School Division	Grade 7/8 building alternate assessments Grade 4/5 curriculum and assessment Grade 7/8 curriculum planning Grade 4/5 manipulatives	4	7 5 6 8

High School Implementation Support Teacher, MaryJo Rawleigh

Jurisdiction	SAPDC Implementation Support Teacher district days and attendance	Number of district sessions	Number in attendance
Grasslands Regional Division	Mathematics 10C lesson planning	1	7
Holy Spirit Catholic Schools	Comparison of old and new curriculum, introduction to manipulatives Mathematics 10C curriculum changes Assessment and resources	3	10 7 4
Horizon School Division	Comparison of old and new curriculum, introduction to manipulatives Mathematics 10C curriculum changes	2	4 6
Lethbridge School District			
Livingstone Range School Division			
Medicine Hat Catholic Schools	Mathematics 10C curriculum changes Mathematics 10C curriculum changes	2	4 4
Medicine Hat School District	Mathematics 10C overview (combined session with Prairie Rose)		
Palliser Regional Division	Mathematics 10C curriculum changes	1	13
Prairie Rose Regional Division	Mathematics 10 overview (combined session with Medicine Hat 76) Mathematics 10 Technology	2	16 2
Westwind School Division	Grades K - 10 curriculum changes Grades K - 10 curriculum changes	2	8 5

SAPDC Mathematics Implementation Project Budget 2009 - 2010

REVENUE:	Budget	Exp. To Aug 31-10
AE Allocation/Revenue	\$222,300	
Carry Forward	\$160,469	
TOTAL REVENUE	\$382,769	

EXPENDITURES

Learning Opportunities

Regional Level PD	\$80,000	\$59,328
District Delivered PD Allocation	\$50,000	\$6,011
Regional Consultants Expenses	\$10,000	\$6,171
ARPCD Secondary Institute	\$20,000	\$4,269
Workshop expenses (Copying & Materials)	\$10,000	\$0*
Professional Resources	\$5,000	\$1,508
Administrator Toolkit	\$8,000	\$3,475
Administrator Sessions	\$2,000	\$1,245
Total	\$185,000	\$82,007

Administration

Implementation Support Secondments	\$140,000	\$133,228
SAPDC Consultant Expenses (Travel within region, etc.)	\$20,000	\$2,548
Regional Advisory Committee	\$5,000	\$2,957
Exec Dir and Program Services Mtgs/Expenses	\$8,000	\$1,104
Sub-total	\$173,000	\$139,837
Total	\$358,000	\$221,844
Contingency for Programs	\$14,769	\$0
Contingency for Administration	\$10,000	\$0

Revenue - Expenditures	(\$0)	<u>\$160,925</u>
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